

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/04/10 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 65 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 65 recites that "wherein in use with the hollowed elements at or adjacent the intermediate layer, the apertures present an opening of expanding volume onto the intermediate layer." The recitation of "wherein in use" appears to imply that the hollowed elements were not positively claim. This is unclear because claim 46 appears to positively claim the intermediate cladding layer and the air permeable panel with the pointed outer surfaces of the hollowed elements embedded into the intermediate cladding layer.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36, 38, 46, and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Squires (U.S. Patent No. 4,004,987) herein “Squires.”

Regarding claims 36, 38, 46, and 67, Squires discloses an air permeable panel (60) engaging an intermediate cladding layer (18) having filtering characteristics, the air permeable panel supporting the intermediate cladding layer and comprising: a plurality of hollowed, i.e. indented, projections (42) interconnected in a lattice configuration, said projections each having a pointed tip portion (at 42) and being embedded into the intermediate cladding layer, the respective tip portions being arranged to face in a common direction to engage with the intermediate cladding layer, each said projection further having a base periphery (40, 41) at which adjacent projections are interconnected, the base peripheries being interconnected such that apertures (defined between 40 and 41) are defined between the base peripheries in the lattice configuration.

Claims 36, 38-44, 46, 51- 55, 62, 65, and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller (U.S. Patent No. 2,847,086) herein “Muller.”

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Regarding claims 36, 38, 46, and 67, Muller in Figures 3 and 15 discloses an air permeable panel (g2) engaging an intermediate cladding layer (b) having filtering characteristics, the air permeable panel supporting the intermediate cladding layer and comprising: a plurality of hollowed, i.e. indented, projections (t, as shown in Figure 3) interconnected in a lattice configuration, said projections each having a pointed tip portion (pointed ends of "t" as shown in Figure 3) and being embedded into the intermediate cladding layer, the respective tip portions being arranged to face in a common direction to engage with the intermediate cladding layer, each said projection further having a base periphery (plate g) at which adjacent projections are interconnected, the base peripheries being interconnected such that apertures (c) are defined between the base peripheries in the lattice configuration.

Regarding claim 39, Muller further discloses that the projections are configured to restrict penetration thereof into the intermediate cladding layer.

Regarding claim 40, Muller further discloses that the cross-sectional area of each projection increases along its longitudinal axis away from their pointed tip portion. See piece of "t" as shown in Figure 3.

Regarding claim 41, Muller discloses a panel capable of being used as a building cladding system further comprising a second air permeable panel (g1) wherein the air permeable panels are provided on both faces of said intermediate cladding.

Regarding claim 42, Muller discloses a panel capable of being used as a building cladding system further comprising a first wall member (b2, g3), wherein said first wall

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member is for forming a wall of a building's envelope and wherein said air permeable panel (g2) is located adjacent to the first wall member and is coupled thereto.

Regarding claim 43, Muller further discloses a second wall member (g1), said second wall member for forming an external wall of the building's envelope, wherein said first wall member (b2, g3) forms an internal wall of the building's envelope, and wherein said air permeable panel (g2) is provided between said internal and external wall members.

Regarding claim 44, Muller further discloses one or more edge members (54) configured to interconnect adjacent air permeable wall panels.

Regarding claim 51, Muller further discloses that the intermediate cladding layer has at least one of thermal insulating properties and sound insulating properties.

Regarding claim 52, Muller further discloses that the intermediate cladding layer comprises cellulose and wool (Col 3, Ln 68-70).

Regarding claim 53, Muller further discloses that the intermediate cladding layer is provided in the form of fibers (Col 3, Ln 68-70).

Regarding claim 54, Muller further discloses that the intermediate cladding layer comprises filter materials for gas pollutants or particulate emissions (Col 3, Ln 69-73).

Regarding claim 55, Muller further discloses that the intermediate cladding layer is provided in the form of one or more panel units.

Regarding claim 62, Muller further discloses that the air permeable panel (g2) is pressed from a single sheet.

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Regarding claim 65 as best understood, Muller further discloses wherein in use with the hollowed elements at or adjacent the intermediate layer, the apertures (c) present an opening of expanding volume onto the intermediate layer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49, 50, and 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Rammig et al. (U.S. Patent No. 6,966,939).

Regarding claims 49, 50, and 56-61, Muller does not disclose that the intermediate cladding layer has a graduated filtering profile to as to trap relatively large particles toward an outer surface and to trap relatively smaller particles toward the inner surface, the intermediate cladding layer formed from a plurality of one or more separate replaceable disposable filter layers in modular format with different filtering characteristics to define a substantially complete filter spectrum.

Rammig et al. discloses a filter element made of separate replaceable filter layers (A-G) which progressively filters large to small particles.

It would have been obvious to a person having ordinary skill in the art at the time of the Applicant's to modify Muller to have a graduated filtering profile structured as

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taught by Rammig et al. to provide the predictable result of providing a filter with improved filtering characteristics.

Claims 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller.

Regarding claim 63, Muller does not disclose that the air permeable panel is molded from plastic material. It would have been obvious to one having ordinary skill in the art at the time of invention to use plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Plastic would provide a durable, rust resistant material.

Regarding claim 64, Muller does not disclose that the air permeable panel is molded from fire retardant material. It would have been obvious to one having ordinary skill in the art at the time of invention to use a fire retardant material such as light gage metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). A fire retardant would provide a durable material that could be used in high heat environments.

Allowable Subject Matter

Claims 37, 45, and 48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 66 is allowed.

Response to Arguments

Applicant's arguments with respect to claims 36-46, 48-65, and 67 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nogueras Dardina (US 4931346).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE T. CAJILIG whose telephone number is (571) 272-8143. The examiner can normally be reached on Monday-Thursday, 9 am - 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571) 272-6754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. T. C./
Examiner, Art Unit 3633

/Robert J Canfield/
Primary Examiner, Art Unit 3635